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Nebraska Monthly Economic Indicators: June 15, 2012

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Nebraska Monthly Economic Indicators: June 15, 2012

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Summary: *The Leading Economic Indicator – Nebraska (LEI-N) declined at a moderate 0.52% rate during May 2012. The decline in the LEI-N, which predicts economic growth in the state six months in the future, is the second in three months, signaling weakness in the Nebraska economy during the fall of 2012. In particular, while the Nebraska economy is expected to grow solidly this summer, growth will slow significantly in the fall. The primary reason for the decline in the LEI-N was a rapid increase in the value of the U.S. dollar during May. The rising U.S. dollar will limit export activity by Nebraska farms and factories. Negative business expectations and rising initial unemployment claims also suggest a stagnant Nebraska economy in the fall. Other indicators offered a more positive outlook, however. Manufacturing hours continued to expand in May. Building permits and airline passenger counts also improved during the month.*

Leading Economic Indicator – Nebraska

Figure 1 shows the change in the Leading Economic Indicator – Nebraska (LEI-N) in May 2012, compared to the previous month. The LEI-N, which predicts economic growth six months into the future, fell by 0.52% in May, suggesting slow economic growth during the fall of 2012.

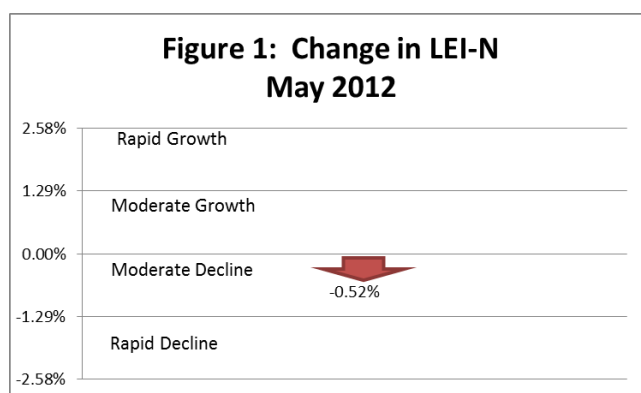


Figure 2 shows the growth in the LEI-N over the last 6 months. The LEI-N increased from December 2011 through February 2012, suggesting solid growth in the Nebraska economy during the summer of 2012. Changes in the LEI-N, however, have been mixed in recent months. In particular, the LEI-N declined in two of the last three months, suggesting that economic growth will stagnate in Nebraska during the September through November 2012 period.

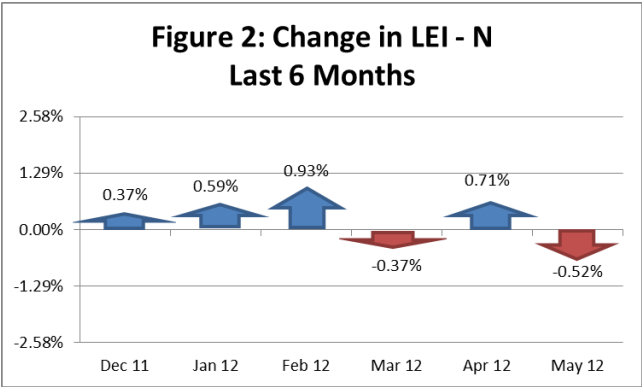
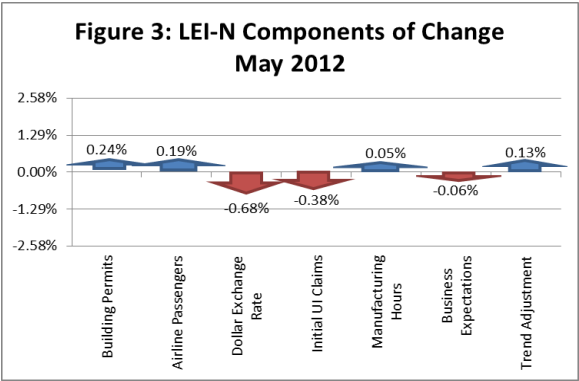
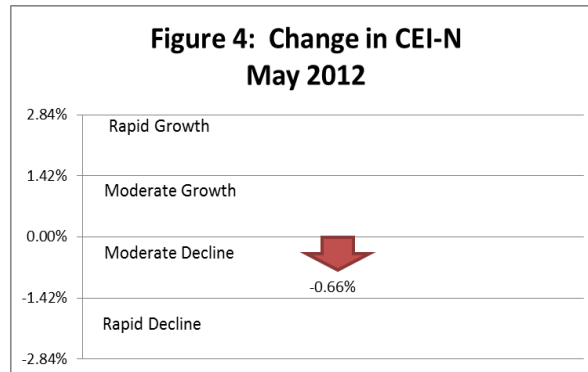


Figure 3 shows the components of change in the Leading Economic Indicator – Nebraska during May 2012. The change in the overall LEI – N is the weighted average of changes in each component (see page 5). The decline in the LEI-N was primarily due to a steep increase in the trade-weighted value of the U.S. dollar during May. This will discourage exports and economic growth in Nebraska. Initial unemployment claims also rose in May. Respondents to the monthly *Survey of Nebraska Business* also reported an expectation of a modest decline in sales and employment in their businesses over the next six months. Among positive trends, manufacturing hours also expanded again in May, for the fourth time in five months. There was also an improvement in building permit activity. Airline passenger counts also rose in May. The modest improvements in these three indicators, however, were insufficient to counter significant increase in the value of the U.S. dollar. Note that the trend adjustment component pictured in Figure 3 is discussed on page 5.

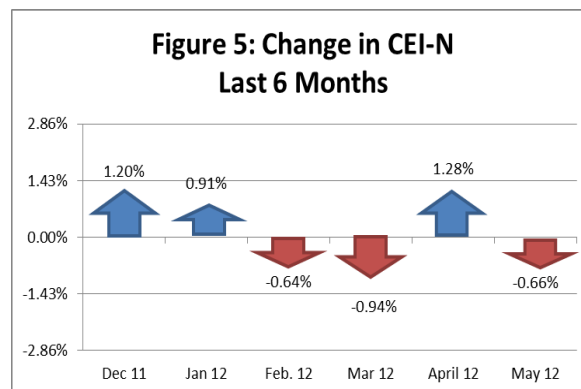


Coincident Economic Indicator – Nebraska

The Coincident Economic Indicator - Nebraska (CEI-N) is a measure of the current size of the Nebraska economy. As seen in Figure 4, CEI-N declined by a moderate 0.66% during May 2012.



As seen in Figure 5, the decline in the CEI-N during May is the third decrease in the last 4 months. This suggests that the Nebraska economy has been essentially flat during the first 5 months of the year.



As seen in Figure 6, declining private wages was the primary reason for the decline in the CEI-N during May. Real (inflation adjusted) private wages declined significantly in May, reflecting weakness in private employment, hours, and real hourly wages. Agricultural commodity prices also declined modestly during the month, hinting at moderation in Nebraska's strong farm and ranch sector. Among positive trends, electricity sales increased in Nebraska in May, after adjusting for weather and other seasonal factors. Further, respondents to the *Survey of Nebraska Business* reported modest increases in sales and employment activity in recent months. A detailed discussion of the components of the CEI-N, as well as the LEI-N, can be found at www.cba.unl.edu in *Technical Report: Coincident and Leading Economic Indicators- Nebraska*.

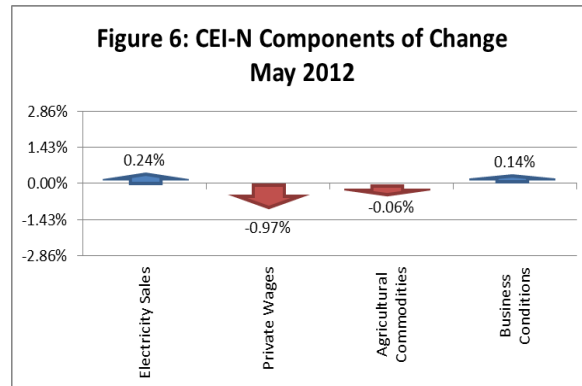
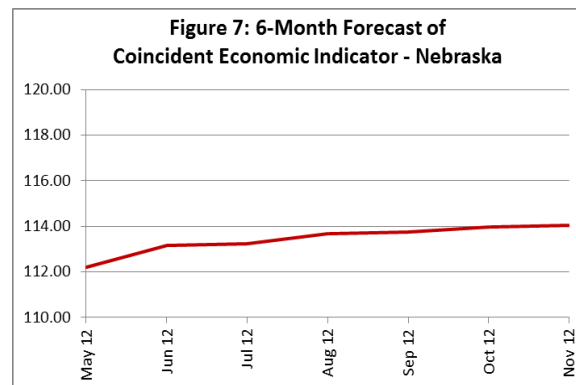


Figure 7 shows the forecast for the CEI-N over the next six months. The forecast reflects changes in the value of LEI-N between December 2011 and May 2012 (see Figure 2). Recall that the LEI-N increased for 3 consecutive months between December 2011 and February 2012, but that LEI-N declined in both March and May. These results suggest solid growth in Nebraska during the summer of 2012 but a significant decline in growth during the fall. These expectations are depicted in the forecast in Figure 7. The expected pace of growth is solid between May and August 2012, but the economy grows very little between August and November.



Weights and Component Shares

Table 1 shows the weights that were used to aggregate the individual components into the LEI-N and CEI-N. The weights are the inverse of the “standardized” standard deviation of each component variable. The term standardized simply means that the inverse standard deviations are adjusted proportionately to sum to 1. This weighting scheme makes sense since individual components that are more stable have smaller standard deviations, and therefore, a larger inverse standard deviation. A large movement in a typically stable economic series would provide a more powerful signal of economic change than a large movement in a series that regularly has large movements.

Table 1: Component Weights for LEI-N and CEI-N							
Leading Economic Indicator - Nebraska				Coincident Economic Indicator - Nebraska			
Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)	Variable	Standard Deviation	Inverse STD	Weight (Inverse STD Standardize)
SF Housing Permits	14.6759	0.0681	0.0335	Electricity Sales	4.8971	0.2042	0.1728
Airline Passengers	3.6978	0.2704	0.1331	Private Wages	1.8231	0.5485	0.4641
Exchange Rate	1.2570	0.7956	0.3916	Agricultural Commodities	3.2429	0.3084	0.2609
Initial UI Claims	9.8677	0.1013	0.0499	Survey Business Conditions	8.2757	0.1208	0.1022
Manufacturing Hours	1.4647	0.6827	0.3361				
Survey Business Expectations	8.8351	0.1132	0.0557				

Tables 2 and 3 show the calculation for the change in CEI-N and LEI-N between April and May. Weights (from Table 1) are multiplied by the change to calculate the contribution of each component. Contributions are converted to percentage terms and summed. Note that in Table 2 a trend adjustment factor is utilized in calculating LEI-N. This is done because LEI-N historically under-predicts CEI-N by 0.13% per month. There is also a trend adjustment factor for the U.S. Leading Economic Indicator.

Table 2: Component Contributions to the Change in Leading Economic Indicator						
Leading Economic Indicator - Nebraska						
Component Index Value (May 2007=100)						
Component	Current	Previous	Difference	Weight	Contribution	Percentage Contribution (Relative to Previous LEI-N)
SF Building Permits	53.69	46.44	7.24	0.03	0.24	0.24%
Airline Passengers	91.37	89.93	1.44	0.13	0.19	0.19%
U.S. Dollar Exchange Rate (Inverse)	103.80	105.58	-1.78	0.39	-0.70	-0.68%
Initial Unemployment Insurance Claims (Inverse)	69.05	76.89	-7.83	0.05	-0.39	-0.38%
Manufacturing Hours	88.35	88.20	0.15	0.34	0.05	0.05%
Survey Business Expectations ¹	48.97		-1.03	0.06	-0.06	-0.06%
Trend Adjustment					0.13	0.13%
Total (weighted average)	101.48	102.01			-0.53	-0.52%

¹ Survey results are a diffusion Index, which is always compared to 50

Table 3: Component Contributions to the Change in Coincident Economic Indicator						
Coincident Economic Indicator - Nebraska						
Component Index Value (May 2007=100)						
Component	Current	Previous	Difference	Weight	Contribution	Percentage Contribution (Relative to Previous CEI-N)
Electricity Sales	109.37	107.83	1.54	0.17	0.27	0.24%
Monthly Wage	92.67	95.03	-2.36	0.46	-1.10	-0.98%
Agricultural Commodities	148.34	148.60	-0.26	0.26	-0.07	-0.06%
Survey Business Conditions ¹	51.53		1.53	0.10	0.16	0.14%
Total (weighted average)	112.19	112.93			-0.74	-0.66%

¹ Survey results are a diffusion Index, which is always compared to 50

Performance of the LEI-N and CEI-N

Further information is available on both economic indicators to demonstrate how well the CEI-N tracks the Nebraska economy and how well the LEI-N leads the CEI-N. Figure 8 shows the value of CEI-N and the real gross state product (real GDP) in Nebraska for 2001 through 2011. The comparison ends in 2011 since this is the last year for which data on real gross state product is available. Annual real gross state product data is provided by the Bureau of Economic Analysis, U.S. Department of Commerce, and quarterly values were estimated using quarterly earnings data. CEI-N closely tracks Nebraska real GDP for the period. The correlation coefficient between the two pictured series is 0.94.

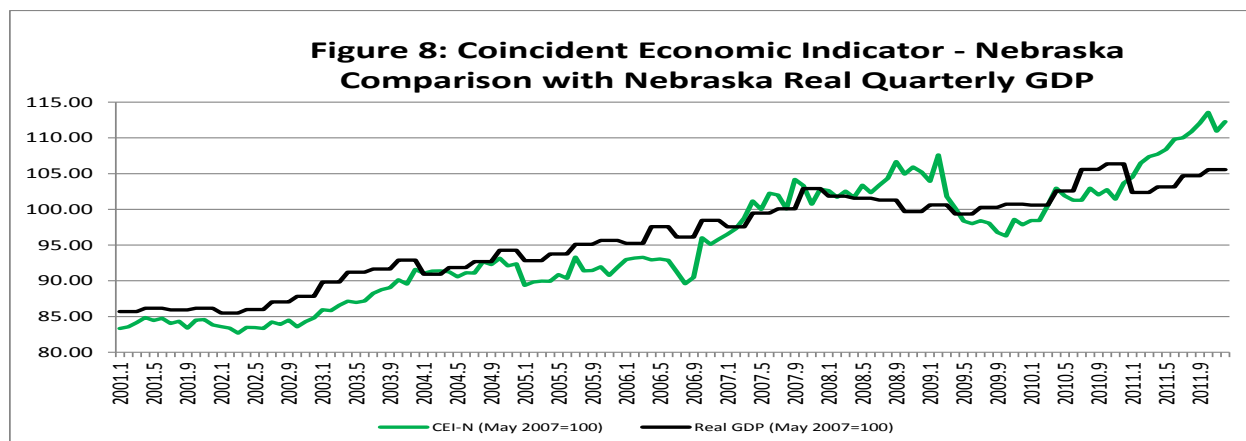


Figure 9 again shows the values for the CEI-N. It also graphs 6-months forward values for the LEI-N. Recall that the LEI-N is intended to forecast the Nebraska economy six months into the future. This implies that Figure 9 is comparing the predicted movement in CEI-N (predicted by LEI-N values six months earlier) with the actual movement in CEI-N. In Figure 9, predicted values using the LEI-N closely track trends and movement in the CEI-N. The correlation coefficient between CEI-N and six-month forward values of LEI-N is 0.91.

